

Statement of

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OPENING

Ms. Victory and members of the Committee, my name is John Archer and I am the Vice President, Operations for XM Satellite Radio. On behalf of XM, I would like to thank you for having me here today to talk about the impact of Hurricane Katrina on the telecommunications and media infrastructure in the Gulf Coast area.

As you probably know, XM is the leading provider of satellite radio service in the world today, offering 160 channels of high-quality, continuous, multi-channel audio service throughout the United States--from downtown urban cores to the most rural and remote parts of the United States. During Hurricane Katrina, however, we played a far more critical role as a vital source of information for millions of Gulf Coast residents impacted by the disaster.

Today, I would like to talk about two main topics. First, I will discuss how XM served as a critical source of information before, during, and after Hurricane Katrina. Second, I will briefly explain how satellite technology in general, and XM in particular, can play an even greater role in disseminating information during future disasters.

BACKGROUND

Let me begin by first explaining a bit about XM's history and its satellite radio technology. XM was one of the winning bidders in the FCC's auction held in April 1997 to provide satellite radio service using frequencies in the 2.3 GHz band. The use of the 2.3 GHz band for satellite radio is critical, because these frequencies are unaffected by the rain fading that afflicts many other satellite services. This is critical during hurricanes and other severe storms.

In 2001, we successfully launched two satellites. We have since launched a third satellite in early 2005 and will be launching our fourth satellite soon. Our satellites provide coverage of over 99 percent of the contiguous United States. In those areas where satellite signals are blocked by buildings or terrain, we have deployed and are operating a network of in-band

terrestrial repeaters to supplement our coverage. All of our satellite radio programming is simultaneously transmitted by our satellites and terrestrial repeaters directly to subscribers' receivers throughout our coverage area.

The consumer devices used to receive our programming are not the typical large and immobile "dishes" used to receive most forms of satellite communications. Rather, our consumer receivers are small, mobile, and lightweight -- some receivers are as small as a deck of cards; our receivers are also very affordable -- some are available for as little as \$50; and all of our receivers are readily available off-the-shelf throughout the nation at major consumer electronics stores or over the Internet. Our receivers also use omnidirectional antennas which eliminate the need to point the receiver at a satellite. Also, most of our receivers are battery powered, such as those that operate in vehicles as well as the portable satellite radios which have become increasingly popular. This is important because it means our receivers continue to operate even when electrical power is disrupted.

XM SERVED AS A CRITICAL SOURCE OF INFORMATION BEFORE, DURING, AND AFTER HURRICANE KATRINA

I would now like to discuss the actions XM took before, during, and after Hurricane Katrina to use its satellite infrastructure to deliver critical information to areas impacted by the hurricane. Let me first note that we at XM acknowledge the remarkable efforts of terrestrial broadcast station employees who braved life-threatening conditions to try to keep television and radio stations broadcasting during the crisis. Unfortunately, the forces of nature in many cases simply proved insurmountable. Indeed, the recent White House Katrina Report concludes that during Hurricane Katrina "most of the radio stations and many television stations in the New

Orleans area were knocked off the air.”¹ And, as Ken Moran, the Director of the FCC’s Office of Homeland Security has explained, “nearly one hundred radio and television stations remained off the air a month after Hurricane Katrina’s landfall.”² The White House Katrina Report also quotes Paul McHale, the Assistant Secretary of Defense for Homeland Defense, as stating that “The magnitude of the storm was such that the local communications system wasn’t simply degraded; it was, at least for a period of time, destroyed.”³

Of course, it was not just the broadcasters but most terrestrial-based communications infrastructure that was devastated by Hurricane Katrina.⁴ Unfortunately, in times of disaster, the terrestrially-based infrastructure upon which the American public and first responders rely for communications and information are impacted by the same disaster.

One form of communications that continued to operate without interruption during the storm was satellite technology. Satellites are located thousands of miles above the Earth and are thus able to operate even when disasters occur on the ground. Although some of our ground-based terrestrial repeaters suffered damage in the Gulf Coast region, our satellite signal continued to deliver critical information to anyone with an XM receiver.

We at XM have long appreciated the critical benefit of satellite technologies in times of emergency. With that in mind, when Hurricanes Ivan and Jeanne hit Florida in September 2004, we launched a new channel -- XM Emergency Alert, Channel 247. This channel is dedicated to providing critical, updated information before, during, and after natural disasters, weather

¹ *The Federal Response to Hurricane Katrina: Lessons Learned* (February 2006) at 34 (available at www.whitehouse.gov/reports/katrina-lessons-learned.pdf) (“White House Katrina Report”).

² Kenneth Moran, Director of the Office of Homeland Security, Enforcement Bureau, Federal Communications Commission, Written Statement for a Hearing on Hurricane Katrina and Communications Interoperability (September 29, 2005), submitted to the Senate Committee on Commerce, Science and Transportation, 109th Congress, 1st session.

³ *White House Katrina Report* at 34.

⁴ *Id.* at 55-56.

emergencies, and other hazardous incidents to listeners across the country. On this channel, listeners can receive key survival information such as evacuation routes, shelter locations, and updated weather emergency information for impacted areas. The critical information delivered on these channels is received from various sources, such as state and local governments, FEMA, the National Weather Service, the U.S. Department of Health and Human Services, the American Red Cross, and even eyewitness reports. We provide listeners with a toll-free number to call to both inform us of important developments and request more detailed information concerning the disaster. We have a dedicated staff that works round the clock to deliver this information.

During Hurricane Katrina, when other means of communication were disabled, XM Channel 247 served as a key source of information for hurricane victims, safety officials, relief workers, and local news media in the area. This channel is free. There is no subscription fee required. All you need to receive the channel is an XM receiver. And, because this information is delivered by satellite and because our receivers are predominantly battery-operated, the information will be available even when terrestrial-based communications infrastructure is destroyed. In other words, if you have an XM receiver during a disaster, you will continue to receive vital emergency information. We received reports after Hurricane Katrina praising our service for its ability to provide critical information when terrestrially-based media outlets were disabled. For example, an XM subscriber from Metairie, Louisiana explained how he used his portable XM receiver to listen to XM Channel 247 to keep his neighbors informed as events unfolded during and after the Hurricane.

During Hurricane Katrina, we also established an additional public safety channel, Red Cross Radio, XM Channel 248. This channel provided information pertinent to Red Cross workers in the Gulf Coast region, as well as Red Cross aid stations in Houston and other cities,

as they assisted in the relief effort. We also donated more than 300 radios for Red Cross workers to listen to the Red Cross Radio channel. Again, as with XM Channel 247, Red Cross Radio was available to anyone with an XM receiver without the need to pay a subscription fee.

XM's Role in Future Disasters

Now, I would like to briefly explain how satellite technology in general, and XM in particular, are ready now to play an even greater role in disseminating information during future disasters. One of the recommendations of the recent White House Katrina Report was the following: "To restore operability and achieve interoperability, there is a strong need for rapidly deployable, interoperable, commercial, off-the-shelf equipment that can provide a framework for connectivity among Federal, State, and local authorities."⁵ We think consumer satellite devices available today can go a long way towards achieving this goal.

The benefits of satellite technology during times of disaster are obvious – satellites provide ubiquitous coverage and they are not impacted by ground-based disasters. While XM currently lacks a two-way communications capability, our one-way distribution system is particularly effective in delivering vital information to multiple parties during a disaster.

For example, some of the XM receivers that are currently available off-the-shelf display detailed information on weather and surface conditions, including real-time weather radar that enables precise tracking of hurricanes and other severe storms, such as tornados. A mobile emergency crew equipped with one of these receivers could track an oncoming storm to determine the areas in which the most severe damage will likely occur. Armed with such information, emergency personnel can be deployed quickly to those areas where relief is most needed.

⁵ *Id.* at 97.

Looking into the future, we also have the capability of delivering a reliable, dedicated audio channel to emergency personnel and decision-makers across various levels of government and across multiple jurisdictions. Imagine, for example, if Federal, State, and local public safety officials were equipped with a device capable of receiving XM's signals. This could either be a stand-alone XM receiver or it could be integrated into another device, such as a public safety wireless device. Through addressable receiver technology, we could transmit a channel with critical information that is capable of being received only by those public safety officials. And, because the information is delivered by satellite, it will be transmitted not just to officials on the ground in the immediate vicinity of a base station, but to officials throughout XM's coverage area, including aboard aircraft and watercraft. This will vastly improve coordination among the various Federal, State, and local authorities responding to a disaster. We believe our communications network can play a major role in achieving this degree of interoperability, and we look forward to continue our work with federal, state, and local officials to make this a reality.

Conclusion

I thank you for providing me with the opportunity to speak today. I hope the recommendations this Panel makes to Chairman Martin will recognize the role satellite radio played during Hurricane Katrina and how satellite radio might play an even greater role during future disasters in disseminating vital emergency information.